

David Arthurs

# Imperilled Patrimony

## Rescuing Threatened Archaeological Resources in Kluane National Park



*Aerial view of Bighorn Sites 1 and 2 at confluence of Bighorn Creek and Donjek River, Kluane National Park Reserve. Photo by David Arthurs.*

**T**he loss of archaeological patrimony is one of the most challenging issues confronting cultural resource managers the world over. Parks Canada is charged through its Cultural Resource Management Policy with the dual mandate of protection and presentation of the cultural resources under its care. One tool by which this is accomplished is the National Threatened Sites Program.

Threatened Sites are those which are identified through formal evaluation to be currently at risk, or are expected to be threatened by major damage or loss within 10 years of their assessment, and which require intervention above the level of routine maintenance. The threats considered under this program are primarily the result of natural processes such as accelerated erosion, or may stem from visitor impacts. For inclusion on the National Threatened Sites List, archaeological resources should retain structural and stratigraphic coherence, and should be sufficiently intact to provide information useful to program interpretive goals, or to enhance the understanding of Canadian history.

These sites are given priority in the allocation of increasingly scarce heritage resource funds. They may be recommended for regular monitoring, stabilization, or, in situations where preservation is not an option, rescue excavation. Sites which have been adequately mitigated, are no longer at risk, or from which all material evidence has been removed, may be retired from the list.

Approaches to the implementation of the program differ in the regions across the country. In the Prairie and North West Territories (PNWT) Region, responsible for cultural resources in National Parks and National Historic Sites in the central Canadian provinces and the north, Threatened Sites Program funding has been used primarily to evaluate and assess threats to cultural resources, and to monitor threatened sites, in order to provide data for effective management decision-making. In some circumstances, Threatened Sites monitoring has led to specific mitigation projects mounted by the National Parks or National Historic Sites themselves.

Among the major Threatened Sites initiatives of the past few years was a mitigation project in Kluane National Park Reserve, in the southwestern

Yukon Territory. During a 1990 patrol through the northern part of the park, Kluane Park Wardens discovered a cluster of precontact archaeological sites perched on the high bluffs overlooking the Donjek Valley. They were heavily impacted by wind erosion and mass wastage, and inspection by Archaeological Services staff indicated that these sites, the largest concentration of precontact components known in the park, held valuable information on the cultural history of the area which was rapidly being lost. It was recommended that several be identified as Threatened In-situ Archaeological Assets under Parks Canada's National Threatened Sites Program.

Several of these sites, including two at the confluence of the Bighorn and Donjek Rivers, were selected for further examination. The objectives of the investigations were to salvage cultural deposits eroding from the edge of the high bluffs overlooking the Donjek River gravel bars, and to gather environmental data to better understand the context of human occupation and land use in the valley in antiquity.

Bighorn Creek Site 1 stretched for over half a kilometre along the Donjek river bank. Here, wind erosion had taken a heavy toll on the cultural resources. Strong winds, generated by the glacier at the head of the valley, have scoured out deep channels in the loess soils that mantle the 30-metre high bluffs along the river corridor. This action has in places cut through some three to four metres of overburden, exposing the deeply buried cultural deposits.

Several charcoal-laden hearth features have been exposed in the blowouts. Lithic debitage, tools, and fragments of animal bone lie scattered down the erosion slope. Among the surface recoveries were microblade tools of obsidian, basalt, and other materials, lanceolate and notched projectile points (some of the former with ground bases), and large oval basalt bifaces. A few artifacts appeared to be associated with a compact red-brown palaeosol which had developed on an early post-glacial loess in a grassland environment between 8,000 and 2,800 years ago. Others appeared to have originated both above and below the White River Ash, a distinctive band of tephra



Rescue excavations at Bighorn Creek Site 2, Kluane National Park Reserve. Photo by D. Arthurs.

from a volcanic event which has been firmly dated to 1,250 BP and forms a convenient horizon marker. There was evidence in the soil column of periodic inundations, when a glacier surging out of a side valley created an ice dam across the river, flooding the upper reaches of the Donjek Valley several times between the end of the Hypsithermal and the modern era.

In addition to controlled surface collection, limited salvage excavations were conducted in areas of the site heavily

impacted by erosion. The principal area excavated was found to be a small sheep hunting campsite, occupied briefly, and perhaps periodically, between about 1,800 and 1,650 years ago. Among the recoveries were the remains of a small birch bark container, found beside an eroding hearth that produced a calibrated radiocarbon date of 1,800 BP. Two other hearths contained charred coniferous needles, some of which could be identified as black spruce. Neither birch nor black spruce are found in the area today. An unfinished ladle fashioned from mountain sheep horn found on the surface produced an AMS date of about 1,650 BP, suggesting that it probably related to the major occupation. This extends this technology, documented in historic times, back nearly two millennia.

Bighorn Creek Site 2, on the point overlooking the confluence of Bighorn Creek and the Donjek River, presented a different but no less challenging situation. The ever-shifting braided stream channels continually destabilize the bank, and large blocks of soil exfoliate from the flanks of the point and slide downslope into the river, taking with them the cultural deposits.

Excavations were strategically situated along the slump blocks, to salvage cultural resources in immediate peril. These deposits were found to be stratified, representing at least four occupations between about 2,000 and 600 years ago. In each, the bones of mountain sheep attested to the major activity associated with the occupation. The mountain slopes flanking the Donjek Valley are the most northerly all-season range for Dall's sheep in North America, and the evidence demonstrates continuity

in the harvesting of this resource over several thousand years.

Limited testing was performed on a third site, farther up the Bighorn Creek canyon, where a crescentic knife of Native copper had been recovered by park staff. A hearth eroding from the cut bank nearby yielded a calibrated radiocarbon date of 1,161 BP, making this one of the earliest dated copper specimens from the Yukon.

Ancillary studies are under way to determine the environmental context of the Donjek sites through an analysis of faunal and floral remains and gastropods. As well, the trace element fingerprinting of the copper artifact and various lithic raw materials from the park should assist in determining regional resource acquisition and distribution patterns over time. It is anticipated that the evidence collected from these and other Donjek Valley Threatened Sites will permit construction of a detailed cultural chronology for the period between about 4,000 and 600 years ago, which will reflect the complex interplay between people and the environment in antiquity.

In spite of their heavily impacted condition, the Donjek Valley sites have contributed a wealth of information to the cultural history of Kluane National Park Reserve. Through the vehicle of the Threatened Sites Program, it was possible to identify the need for mitigation of these imperilled resources and recover critical data before it was too late.

## References

- Arthurs, D.  
1995a Archaeological Surveys in the Donjek, Jarvis, Kaskawulsh and Alsek Valleys, Kluane National Park Reserve, 1993, *Microfiche Report Series, No. 510*, Department of Canadian Heritage, Parks Canada, Ottawa.  
1995b The 1993 Kluane Cultural Resource Management Project, *Research Bulletin No. 315*, Department of Canadian Heritage, Parks Canada, Ottawa.  
1996a The Bighorn Copper Crescen, *Centre-Field, Newsletter of the Professional and Technical Service Centre*, 2(3):6-7.  
1996b Rescue Archaeology in the Donjek Valley, Kluane National Park Reserve, 1994 and 1995, *Research Bulletin No. 317*, Department of Canadian Heritage, Parks Canada, Ottawa.  
Canada. Department of Canadian Heritage. Parks Canada. 1994 *Parks Canada Guiding Principles and Operational Policies*, Ottawa.

David Arthurs is National Parks Archaeologist, Professional and Technical Services, Parks Canada, Winnipeg, Manitoba.